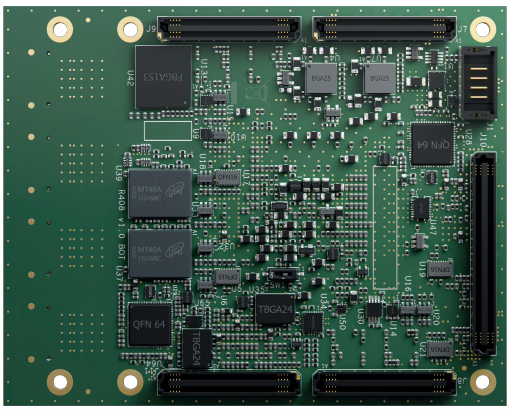
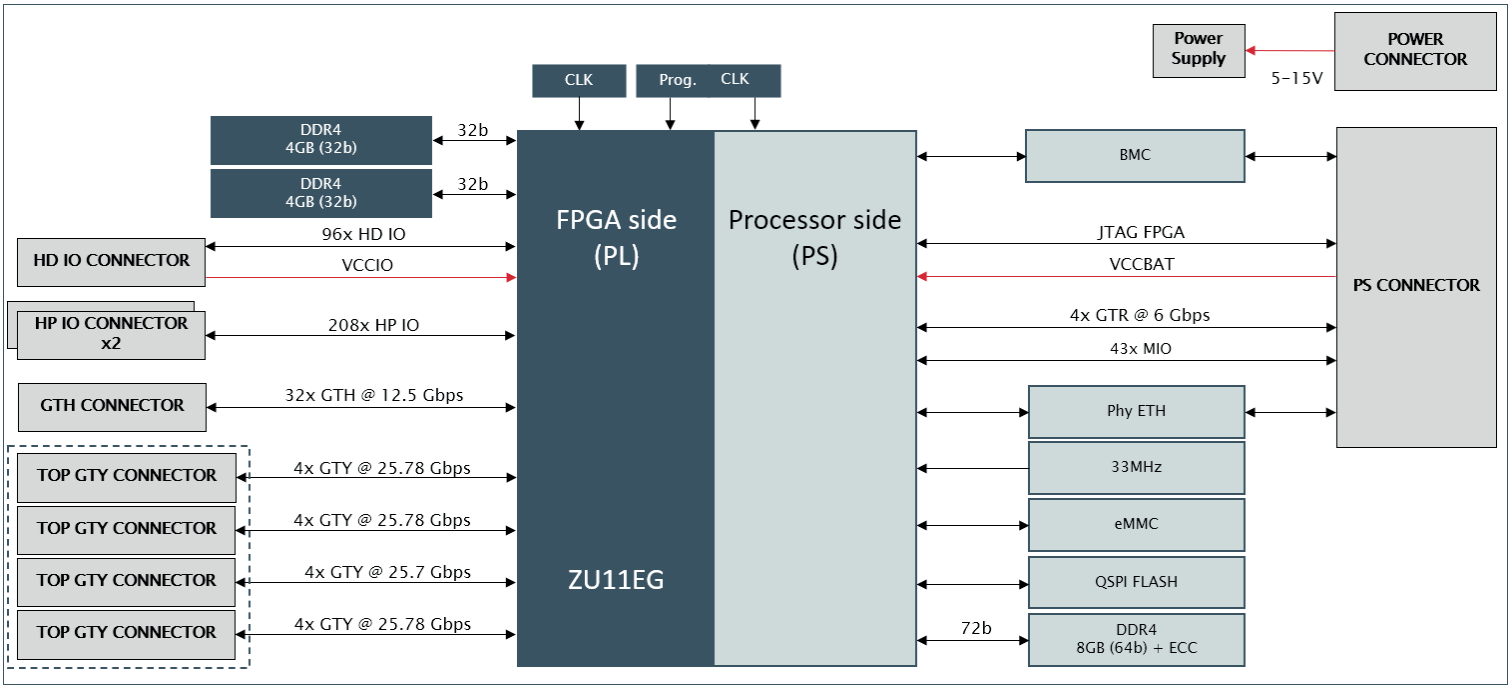
REFLEX CES
Custom Embedded Systems

Zeus Zynq® UltraScale+™ MPSoC System-on-Module





- Zynq® UltraScale+™ MPSoC ZU11EG
- PCIe Gen2 x4 Root Complex
- PCIe Gen3 x16 End Point
- QuadCore ARM Cortex-A53

- 304 SE IOs total (104 LVDS)
- 16 GTY @25.78Gbps (Top side)
- 32 GTH @12.5Gbps (Bot side)
- 3x DDR4 banks, 16GBytes Total
- Industrial Temp Grade
- Long Term Supply

- High Precision Measurement
- Artifical Intelligence
- Radar Systems
- Software Defined Radio
- "Customizable"

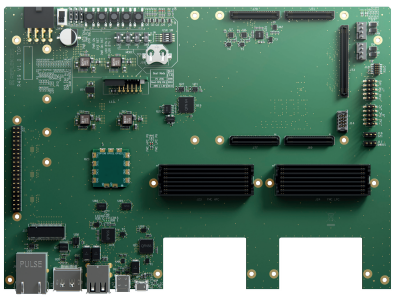
Features	Zeus Zynq® UltraScale+™ MPSoC	
FPGA SoC	**XCZU11EG-1FFVC1760I device** Programmable Logic 650 KLC, Block RAM 21.1MB, UltraRAM 22.5Mb, 2928 DSP Slices FPGA speed grade 1, Industrial Temp Range Quad-core ARM Cortex-A53 MPCore at 1.2GHz Dual-core ARM Cortex-R5 MPCore at 500MHz Mali™-400 MP2 at 600Mhz	
DDR4 Memory	PL= 2 banks 4GB each @2400MT/s, x32bit	
	PS= 1 bank 8GB @2400 MT/s, x64bit + x8bit ECC	
PS Communication & Networking	10/100/1000 Base-T Ethernet RGMII 43x MIO (Nand flash, eMMC or SD card, Eth RGMII, USB, SPI, I2C, UART, GPIO)	
Top Connectors	High Speed Accelerate connectors (GTY)	4x 4 serial transceivers channel (RX and TX) at 25.78Gbps (Existing cable adaptor to QSFP+ and SFP+ connectors)
Bottom Connectors	Processor (PS) Mezzanine connector	4x Serial transceivers channel (RX and TX) at 6Gbps PCIe Gen2 x4 Root Complex capable 43x MIO
	GTH Mezzanine connector	32x Serial transceivers channel (RX and TX) at 12.5Gbps PCIe Gen3 x16 End Point capable
	HP Mezzanine connectors	208x HP I/O high speed up to 1260 Mb/s, designed for high-speed chip-to-chip interfaces with voltages up to 1.8V
	HD Mezzanine connector	96x HD I/O low speed up to 250 Mb/s, designed to support low-speed interfaces with voltages 3.3V, 2.5V, 1.8V, 1.2V
FPGA Configuration	JTAG available on Processor (PS) Mezzanine connector	
	Quad SPI 2x1Gb Nor Flash for non-volatile storage, remote upgrade and failsafe configuration	
Software Configuration	128GB Nand Flash eMMC (Stores U-Boot, Linux Kernel, and RootFS)	
Mechanical & Environmental Specification	Module rugged for shocks and high vibration IEC/EN61000 (EMI immunity), EN61000 + EN55032 (EMI emission), EN60068 (Vibration: sinusoidal, 10Hz - 4000Hz, +/- 0.15mm, 2g ; Shock: half-sinusoidal, 11ms, 15g) 5-15V Power Input Industrial temperature grade -40°C to +85°C Conformal coating (option on request) Free of ITAR control	
Power & Dissipation	70W max, active heatsink	
Board Management Controller	Communication with Carrier board: I2C, UART, SMBus Communication with FPGA : 1x UART to PL, 1x UART to PS Monitoring : Current, voltages, temperature, ID information Programming : Clock, QSPI FPGA, QSPI BMC Control: Power, temperature protection, Fans	
Module dimensions	107mm x 85mm (4 x 3.4 inches) / 12mm thickness (38.6mm with active heatsink and heat spreader)	
Deliverables	Zeus Zynq® UltraScale+™ MPSoC module Active heatsink with heat spreader	
Ordering Information	RXCZUP11EGPF42-SOM01I	

Zeus Carrier Board

The Zeus Carrier board is sold separately
Ordering information : RXCZUP-CBD0SA

The following deliverables are only included with the purchase of a carrier board :

- PDF Documentation (Starter Guide, Reference Manual, Interconnect pinout file)
- Power supply and cables (US, UK, EU, JP), interface cables (USB, Ethernet)
- Test designs (Vivado II project)
- Linux Kernel & Linaro optimized distribution, U-boot bootloader, Test scripts
- Mechanical drawings, 3D step, assembly files
- Carrier board schematics
- Carrier board Design Guide
- Online support at **support.reflexces.com**



Zeus Carrier board
170mm x 233.35mm

Europe Sales Office / sales@reflexces.com
North America Sales Office / salesusa@reflexces.com

© REFLEX CES 2020-All Rights Reserved– Sept/v2.1